

Claims

1. A method for two-level variable chip rate spreading and despreading in CDMA (Code Division Multiple Access) system, wherein at a transmitting side, a transmitter applying a first level spreading to data information with a first level spreading code, the first 5 level spreading gain being the length of the first level spreading code, and applying a second level spreading to the first level spread chip with a second level spreading code, the second level spreading gain being a length of the second spreading code; at a receiving side, a receiver despreading the second level spread chip first, its integrating area being the chip width of the first level spread chip, then despreading the first level spreading chip, its integral 10 area being the width of a information bit.

2. The method for two-level variable chip rate spreading and despreading in CDMA system according to claim 1, wherein the first level spreading gain being the length of the first level spreading code, the second level spreading gain being a length of the second spreading code, and the total spreading gain is a product of the respective spreading gains 15 after the two level spreadings.

3. The method for two-level variable chip rate spreading and despreading in CDMA system according to claim 1, wherein in a system which the transmitters of respective 20 base stations are quasi-synchronized, said method applying to the downlinks in CDMA system, said first level spreading code being used as a common code for all users in the same cell to distinguish users of different cells, said second level spreading code being used as the channel codes for each of the users of the cell to distinguish different users of the same cell.

4. The method for two-level variable chip rate spreading and despreading in
CDMA system according to claim 1, wherein said method applying to the uplinks of the
quasi-synchronized CDMA system, said first level spreading code being used as the common
codes for all users in the same cell to distinguish users of different cells, said second level
5 spreading code being used as the channel codes for each of the users of the cell to distinguish
different users of the same cell.

5. The method for two-level variable chip rate spreading and despreading in
CDMA system according to claims 1, 3 or 4, wherein ZCZ sequence which the zero
10 correlation zone Z is 1 being used as the common codes, ZCZ sequence having the
corresponding zero correlation zone being used as the channel codes, and said receiver
despreading the common codes and the channel codes respectively.

6. The method for two-level variable chip rate spreading and despreading in
15 CDMA system according to claims 1, 3 or 4, wherein Walsh sequence being used as the
common codes, ZCZ sequence having the corresponding zero correlation zone being used as
the channel codes, and said receiver despreading the common codes and the channel codes
respectively.

20 7. The method for two-level variable chip rate spreading and despreading in
CDMA system according to claims 1, 3 or 4, wherein ZCZ sequence which the zero
correlation zone Z is 1 being used as the common codes, the orthogonal sequence being used
as the channel codes, and said receiver despreading the common codes and the channel codes
respectively.

8. The method for two-level variable chip rate spreading and despreading in
CDMA system according to claims 1, 3 or 4, wherein PN (pseudo-random) sequence being
used as the common codes, and ZCZ sequence having the corresponding zero correlation
5 zone being used as the channel codes, and said receiver despreading the common codes and
the channel codes respectively.